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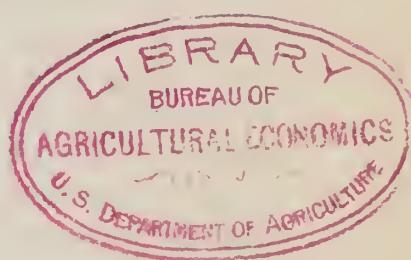
NEW YORK STATE DEPARTMENT OF AGRICULTURE AND MARKETS

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APPLE MANUFACTURES

THE USE OF APPLES IN CIDER MILLS,  
EVAPORATORS AND CANNERIES IN NEW YORK STATE

1937- 39



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Albany, New York  
June 1940

APPLE MANUFACTURES IN NEW YORK, 1937-39

In New York State, relatively large quantities of apples are used each year in cider mills, evaporators and canning factories, and there is continued interest in expanding the use of apples in various food, beverage and industrial products.

The manufacturing industry provides an outlet for apples which, in many cases, cannot economically be sold for consumption as fresh fruit, either because of market conditions or because of some apparent defect in size, appearance or other quality factor which makes them unsuitable for the usual fresh fruit markets. In seasons of heavy production, particularly, considerable quantities of high grade fruit, ordinarily suitable for fresh fruit markets, are also utilized by processors.

The apple crop of 1939 was relatively heavy, export outlets were greatly reduced on account of the European war situation, market prices were low, and the takings by manufacturers were large, being about 10 percent over the heavy season of 1937 and more than double those from the light crop of 1938. The operations are highly seasonal, and many cider mills and evaporators are opened in years of heavy crops and closed in years of light supply.

The survey of manufacturing of apples from the 1939 crop, summarized in these pages, was made by methods similar to those used in 1937 and 1938. Simple report blanks were mailed to available lists of establishments, with repeated follow-up requests for those not answering promptly. In a number of cases, representatives of the Fruit and Vegetable Inspection Service of the Department of Agriculture and Markets made personal visits to the proprietors of the establishments. It was necessary in a few instances to make estimates of the operations, the estimated amounts, however, being a very small proportion of the total. A considerable number of establishments, especially those doing a small volume of business, or doing mainly custom work, had inadequate records, and necessarily estimated a part of their operations.

It is believed that the totals given here are essentially complete and accurate, and comparable with 1937 and 1938 which are presented for comparison.

The cooperation of the owners or operators of the establishments in making the data available, and of all others who assisted with the project, is cordially acknowledged.

TABLE 1- APPLES AND APPLE PRODUCTS IN CIDER-MILLS, EVAPORATORS AND CANNERRIES, 1937-39.

	CROP YEAR 1937	CROP YEAR 1938	CROP YEAR 1939
<u>APPLE CIDER MILLS:</u>			
Mills in operation, No. <u>1/</u>	573	452	504
Apples received, bushels <u>2/</u>	4,434,300	2,621,800	4,772,900
Cider pressed, gallons <u>3/</u>	18,493,800	10,662,000	19,949,600
Average price paid for cider apples, expressed as prevailing price per 100 pounds	22¢	26¢	18¢
Average date pressing started	Oct. 4	Oct. 4	Oct. 2
" " " ended <u>4/</u>	Dec. 1	Nov. 30	Dec. 6
Of the apples received, there were from other states, bushels	9,600	10,300	6,800
<u>APPLE EVAPORATORS:</u>			
Evaporators in operation, No.	47	29	45
Apples received, bushels	1,284,800	373,900	1,207,100
Dried apples produced, pounds	7,101,200	2,147,700	7,076,700
Dried chops produced, pounds	727,000	192,300	461,700
Dried skins and cores, pomace and waste, pounds	2,426,300	104,000	611,944
Average price paid for drying apples, expressed as prevailing price, per 100 pounds <u>5/</u>	33¢	28¢	27¢
Average date drying started	Oct. 4	Oct. 5	Oct. 8
" " " ended	Dec. 5	Nov. 16	Dec. 19

See footnotes at end of table, page 5.

TABLE 1- APPLES AND APPLE PRODUCTS IN CIDER-MILLS, EVAPORATORS AND  
CANNERIES, 1937-39- CONTINUED

	CROP YEAR 1937	CROP YEAR 1938	CROP YEAR 1939
<b>CANNING FACTORIES USING APPLES:</b>			
Canneries using apples, No.	27	22	26
Apples received, bushels	1,893,200	874,300	2,417,500
Less transfers to cider mills, etc., bu.	20,100	8,100	35,600
Net apples used in canneries, bu.	1,873,100	866,200	2,381,900
Apples used in canning factories:			
For canned apples and apple-sauce, bu.	1,657,700	790,100	1,987,800
Pressed for cider in factories, bu.	66,700	9,000	278,900
For other purposes such as apple butter, jelly, mince-meat, apple juice, frozen apples, etc., bu.	148,600	64,400	113,400
Loss and waste	100	2,700	1,800
Net utilization	1,873,100	866,200	2,381,900
Cider pressed in canning factories, including that from skins and cores, gallons			
Average price paid for canning apples expressed as prevailing price per 100 pounds 5/	43¢	58¢	43¢
Raw apples, before paring, used:			
Per doz. No. 10 cans of canned apples, pounds	113.2	118.2	120.7
Per case of 24 No. 2 cans of apple sauce, lbs.	38.6	38.3	38.4
Average date canning started	Oct. 6	Oct. 11	Sept. 28
" " " ended	Dec. 9	Nov. 18	Dec. 7
Of the apples received, there were from other states, bushels	1,000	200	600
<b>SUMMARY:</b>			
<b>Apples received at:</b>			
Cider mills, bushels	4,434,300	2,621,800	4,772,900
Evaporators, bushels	1,284,800	373,900	1,207,100
Canneries (net) bushels	1,873,100	866,200	2,381,900
Total received, bu.	7,592,200	3,861,900	8,361,900
<b>Apples used for cider:</b>			
In cider mills, bushels	4,434,300	2,621,800	4,772,900
In canneries, bushels	66,700	9,000	278,900
Total for cider, bu.	4,501,000	2,630,800	5,051,800
<b>Apples used in other ways:</b>			
For drying, bushels	1,284,800	373,900	1,207,100
For canning and apple-sauce, bu.	1,657,700	790,100	1,987,800
For other factory products (incl. waste) bu.	148,700	67,100	115,200
Total for evaporator and cannery, bu.	3,091,200	1,231,100	3,310,100

TABLE 1- APPLES AND APPLE PRODUCTS IN CIDER-MILLS, EVAPORATORS AND CANNERRIES, 1937-39- CONCLUDED

	CROP YEAR 1937	CROP YEAR 1938	CROP YEAR 1939
<u>Products manufactured:</u>			
Cider:			
In cider mills, gallons	18,493,800	10,662,000	19,950,000
In canneries, incl. that from skins and cores, gallons	353,600	146,000	1,707,000
Total cider, gals.	18,847,400	10,808,000	21,657,000
Evaporated apple products:			
Evaporated apples, pounds	7,101,200	2,147,700	7,076,700
Dried chops, pounds	727,000	192,300	461,700
Dried skins and cores, pomace and waste, pounds	2,426,300	104,000	612,000

Other products include frozen apples, apple butter, apple juice, apple jelly, mince-meat and other products for which apples are used.

1/ In 1937, seven mills included here were operated in connection with evaporator or cannery operations. Eliminating this duplication leaves a net of 566 cider mills in operation. Similarly, in 1938, there were 3 duplications, leaving a net number of 449 mills, and in 1939, 2 duplications, leaving a net number of 502 mills.

2/ Does not include skins and cores received from canning factories and evaporators and pressed for cider. Bushels have been taken at rate of 48 pounds per bushel.

3/ Includes cider pressed from skins and cores. The large mills generally extracted a larger quantity of cider from 100 pounds of apples than did the smaller commercial mills and the custom mills. The cider reported includes some quantities of apple juice.

4/ This average date does not include 8 cider mills which, for the 1937 crop, gave their average closing date as March 26th of the following year. On account of the abnormally low prices prevailing for apples from the 1937 crop, some pressing, evaporating and canning were done very late. For the 1938 crop, 9 mills, not included in average date, finished pressing on March 23, on the average, and 8 mills not included in average date finished pressing the 1939 crop on an average date of March 8th.

5/ Includes, in 1937 crop, the price of apples evaporated or canned in connection with the surplus utilization program of the Federal Surplus Commodities Corporation in the spring of 1938. Not including the F.S.C.C. apples, the average price given for raw apples for evaporating was 27 cents per 100 pounds, and for canning the difference was negligible. In each year, the price question was asked as "average or prevailing" price for cider apples, or apples for canning or apples for drying.

TABLE 2- APPLES RECEIVED AT MANUFACTURING PLANTS, CIDER MADE AND PRICES,  
BY DISTRICTS, CROPS OF 1937-39 1/

DISTRICT AND PRODUCT	CIDER-MILLS	EVAPORATORS	CANNERIES	TOTAL
<u>Apples received (net), thousand bushels</u>				
Ontario				
1937	2,604	1,167	1,612	5,383
1938	1,305	347	798	2,450
1939	2,912	1,153	2,190	6,255
Mid-western				
1937	324	88	200	612
1938	236	21	44	301
1939	392	20	141	553
Hudson				
1937	554	-	-	554
1938	390	-	-	390
1939	467	-	-	467
Champlain				
1937	14	-	-	14
1938	11	-	-	11
1939	15	-	-	15
Other				
1937	938	30	61	1,029
1938	680	6	24	710
1939	987	34	39	1,060
Total				
1937	4,434	1,285	1,873	7,592
1938	2,622	374	866	3,862
1939	4,773	1,207	2,370	8,350
<u>Cider made, gallons, thousands:</u>				
Ontario				
1937	11,619	-	354	11,973
1938	5,617	-	146	5,763
1939	12,758	-	1,707	14,465
Mid-western				
1937	1,534	-	-	1,534
1938	896	-	-	896
1939	1,674	-	-	1,674
Hudson				
1937	1,947	-	-	1,947
1938	1,412	-	-	1,412
1939	1,671	-	-	1,671
Champlain				
1937	49	-	-	49
1938	33	-	-	33
1939	40	-	-	40
Other				
1937	3,345	-	-	3,345
1938	2,704	-	-	2,704
1939	3,807	-	-	3,807
Total				
1937	18,494	-	354	18,848
1938	10,662	-	146	10,808
1939	19,950	-	1,707	21,657

1/ See footnotes, page 7.

TABLE 2- APPLES RECEIVED AT MANUFACTURING PLANTS, CIDER MADE AND PRICES,  
BY DISTRICTS, CROPS OF 1937-39- CONCLUDED 1/

DISTRICT AND PRODUCT:	CIDER-MILLS	EVAPORATORS	CANNERIES	TOTAL
Prevailing prices per 100 pounds, apples for manufacture:				
Ontario				
1937	.18	.33	.41	.28
1938	.23	.28	.57	.35
1939	.15	.27	.43	.27
Mid-western				
1937	.24	.26	.52	.33
1938	.27	.25	.67	.33
1939	.19	.20	.46	.26
Hudson				
1937	.25	-	-	.25
1938	.26	-	-	.26
1939	.24	-	-	.24
Champlain				
1937	.21	-	-	.21
1938	.46	-	-	.46
1939	.19	-	-	.19
Other				
1937	.29	.40	.52	.31
1938	.33	.20	.80	.34
1939	.25	.18	.55	.26
Total				
1937	.22	.33	.43	.29
1938	.26	.28	.58	.34
1939	.18	.27	.43	.26

1/ See footnote preceding table for explanations. The districts here given include counties as follows:

Ontario Dist:- Niagara, Orleans, Monroe, Wayne.

Mid-western Dist:- Erie, Genesee, Wyoming, Livingston, Ontario, Yates, Seneca, Tompkins.

Hudson Dist:- Columbia, Dutchess, Putnam, Westchester, Greene, Ulster, Orange, Rockland.

Champlain Dist:- Clinton, Essex.

Other Dist:- All counties not included above.

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$$\frac{1}{x} = \frac{1}{2} + \frac{1}{2} \operatorname{atan} \left( \frac{2x}{1-x^2} \right)$$